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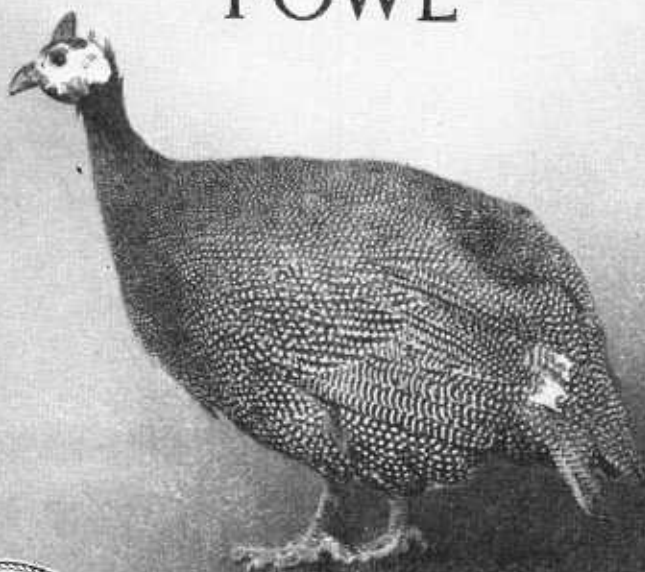
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U. S. DEPARTMENT OF AGRICULTURE

FARMERS' BULLETIN No. 1391 *rev.*
May 1940

The
GUINEA
FOWL



GUINEA FOWL are grown primarily for meat and are used as a substitute for game birds.

They are raised usually in small flocks on general farms, and need a large range for best results.

Domesticated guinea fowl are of three varieties, Pearl, White, and Lavender, of which the Pearl is by far the most popular.

Guineas have a tendency to mate in pairs but one male may be mated successfully with several females.

Guinea hens usually begin to lay in April or May, and will lay from 20 to 30 eggs before becoming broody. If not allowed to set, they will continue to lay throughout the summer, laying from 40 to 60 or more eggs.

Eggs may be removed from the nest when the guinea hen is not setting, but two or more eggs should be left in the nest.

Chicken hens are used commonly to hatch and rear guinea chicks, but guinea hens and turkey hens also may be used successfully, although they are more difficult to manage.

Guineas are usually marketed late in the summer, when they weigh around 1½ pounds at about 3 months of age, and also throughout the year when the demand is for birds weighing more than 2 pounds.

This bulletin is a revision of and supersedes Farmers' Bulletin 858.

THE GUINEA FOWL

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DEMAND FOR GUINEA FOWL IN THE UNITED STATES

GUINEA FOWL are used as a substitute for game birds such as grouse, partridge, quail, and pheasant. Many hotels and restaurants in the large cities serve prime young guineas at banquets and club dinners as a special delicacy. When well cooked, guineas are attractive in appearance, although darker than common fowls, and the flesh of young guineas is tender and of especially fine flavor, resembling that of wild game. Like other old fowl, old guineas are likely to be tough and rather dry.

A few poultrymen, particularly those within easy reach of the large eastern markets, make a practice of raising a hundred or more guineas each year, but most guineas are raised in small flocks of from 10 to 25 on farms in the Middle West and in the South. Many farmers keep a pair or a trio of guineas more as a novelty than for profit, and from these a small flock is raised. Doubtless the guinea fowl would be more popular on farms were it not for its harsh cry. However, some people consider this cry an argument in the guinea's favor, as the guinea will shriek at slight provocation and thus give warning of marauders in the poultry yard. Similarly, the pugnacious disposition of the guinea fowl, although sometimes responsible for disturbances among the other poultry, also makes guineas show fight against hawks and other common enemies. For this reason guineas are sometimes kept as guards over the poultry yard.

The total number of guinea fowl on farms in this country is comparatively small, the estimated number being about 2½ million. This number is slightly less than the number of either ducks or geese and far less than the number of turkeys. The States having the most guinea fowl are Texas, Pennsylvania, Georgia, Alabama, South Carolina, Illinois, Oklahoma, and Missouri.

The highest prices for guinea fowl are paid in the large eastern markets. Guinea raisers who are near these markets or who have developed a trade among private customers receive prices that make

¹ Andrew S. Weiant, author of this bulletin in its original form, resigned from the Department in February 1918.

this industry profitable. The great majority of guineas are produced on general farms and sold to local buyers of eggs and poultry. Old guineas are not in demand and usually bring less than half the price paid for young birds. In the city markets of the Middle West and South the demand for guinea fowl is small, and the prices are correspondingly low. On the Pacific coast very few guineas are raised and marketed.

The demand for guinea fowl for breeding purposes and for guinea eggs for hatching is very limited as compared with similar products in the case of other kinds of poultry. Very few breeders of guineas advertise their stock. During recent years, however, a limited market

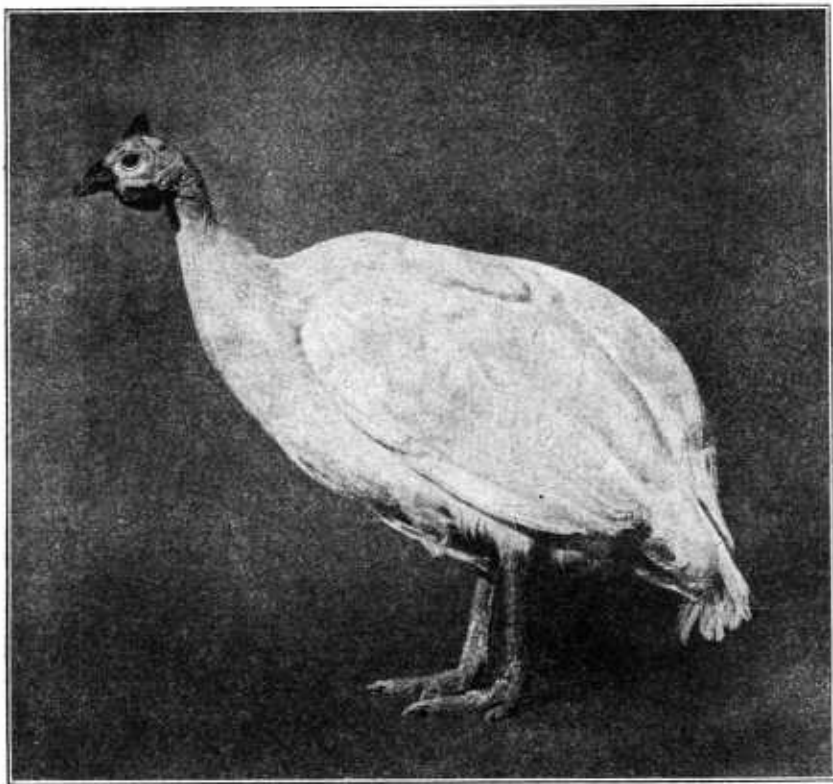


FIGURE 1.—White guinea, male.

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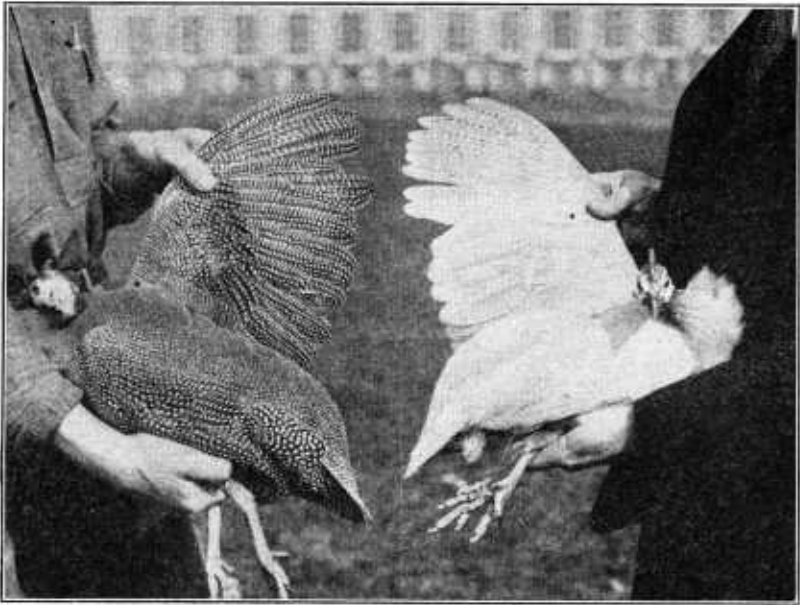
for guinea eggs has developed among the commercial hatcheries, which have an outlet for guinea chicks along with other chicks, ducklings, goslings, and turkey poults.

VARIETIES OF GUINEA FOWL

Several species of wild birds known as guinea fowl are found in Africa and derive their name from Guinea, which is situated on the west coast of that continent. From one of these wild species (*Numida meleagris*) the common domesticated guineas are descended.

They have long been domesticated, having been raised as table birds by the ancient Greeks and Romans, and were introduced into this country by the early settlers. In Africa, where there are many wild flocks, they are highly prized by hunters as game birds, and in England they are sometimes used to stock game preserves. Even in this country a few flocks left to shift for themselves have become so wild as to afford excellent hunting.

Domesticated guinea fowl are of three principal varieties—Pearl, White, and Lavender. The Pearl is by far the most popular. It has a purplish-gray plumage regularly dotted or “pearled” with white and is so handsome that frequently the feathers are used for ornamental purposes. The illustration on the front page shows a male of



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FIGURE 2.—The color of the plumage of the Pearl guinea (left) is purplish gray and the Lavender (right) is light gray. Both varieties are regularly dotted with white.

this variety. The White guinea fowl (fig. 1) is of pure-white plumage, and the skin is somewhat lighter in color than that of the Pearl variety. Lavender guineas resemble those of the Pearl variety, except that the plumage is light gray or lavender, regularly dotted with white instead of dark or purplish gray dotted with white (fig. 2). By crossing the Pearl or Lavender varieties with the White, what is known as the “splashed” guinea is produced, the breast and flight feathers being white and the remainder of the plumage being pearl or lavender. Crosses between guinea fowl and other poultry, particularly chickens and less commonly turkeys, are not unknown, but such birds without exception are sterile.

Fancy guinea fowl, belonging to other species, are seen occasionally at the poultry shows and in zoological parks. These include the Vulturine, the Crested, the Tufted, and a black guinea known as the Negri.

The young guinea chicks are very attractive, those of the Pearl variety resembling young quail. They are brown in color, the under part of the body being lighter than the rest, while the beak and legs are red. The first feathers are brown, but these are replaced gradually by the "pearled" feathers until at about 2 months of age the brown feathers have disappeared completely. About this time also the wattles and helmet begin to make an appearance.

As yet no standard of perfection has been set for guinea fowl, the birds not being recognized by the American Poultry Association. They are exhibited at poultry shows throughout the country, however, and most of these shows offer prizes for the best birds. In

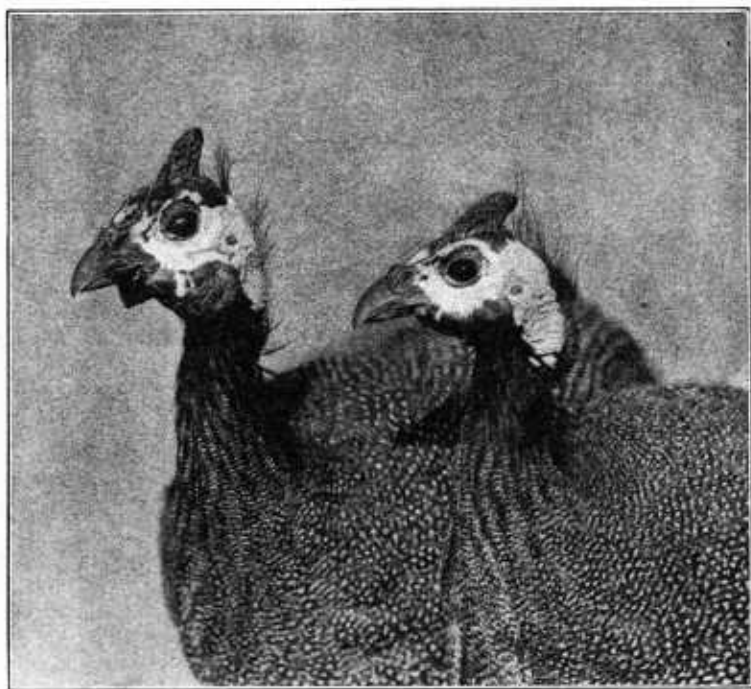


FIGURE 3.—Distinguishing points between male and female guineas: The helmet and wattles of the male (left) are larger than those of the female (right.)

judging guinea fowl, the points regarded as most important are good size and uniform color. White flight feathers in the Pearl and Lavender varieties are the most common defects. In weight, guineas range from 3 to 4 pounds at maturity for both male and female.

DISTINGUISHING SEX

The male and the female guinea fowl differ so little in appearance that many persons have considerable difficulty in making a distinction. Indeed, it often happens that those who are inexperienced in raising these fowl will unknowingly keep all males or all females as breeding stock. Usually sex may be distinguished by the difference

in the cry of the birds and by the larger helmet and wattles and coarser head of the male (fig. 3). In young guineas 12 to 15 weeks of age, the edges of the wattles of the males are thicker than those of the female. The cry of the females resembles "buckwheat, buckwheat," and is decidedly different from the one-syllable shriek of the male. When excited, both the male and the female emit one-syllable cries, but at no time does the male imitate the cry of "buckwheat, buckwheat." Sex can be distinguished by this difference in the cry of the male and female at any time after the birds are about 2 months old.



FIGURE 4.—Proper way to carry a guinea fowl.

BREEDING

Like quail and most other wild birds, guinea fowls in their wild state mate in pairs, and this tendency prevails among domesticated guineas also, provided the males and females are equal in number. As the breeding season approaches, one pair after another separates from the remainder of the flock and ranges off in the fields in search of a suitable nesting place. Once mated in this way, the male usually remains with his mate throughout the laying season, standing guard somewhere near the nest while the hen is laying and ready to warn her of any approaching danger. However, it is not necessary to mate them in pairs under domestic conditions to secure fertile eggs, and most breeders keep but 1 male for every 3 or 4 females. When

guineas are confined in yards, good hatchability has been obtained with 1 male to as many as 10 females. When mated in this way, the hens are more likely to lay near home; and several usually lay in the same nest, thus making it much easier to find the nests and gather the eggs.

With small flocks of guineas kept on free range little attention is given to the feeding of the breeders. A mixture of grains, such as corn, wheat, and oats, is usually fed, and it is desirable to allow the birds access to a growing or a laying mash, such as is used for chickens or turkeys. Sufficient grain should be fed to keep the breeders in good condition. Late in the winter or early in the spring a laying mash should be fed to stimulate egg production. Oystershell or limestone grit should be provided during the laying season.

Guinea fowl are kept in best breeding condition if provided with free range. When it is not practicable to allow the birds free range, they may be raised with considerable success in large yards. Guinea fowl are very difficult to confine unless their wings are pinioned or clipped. Birds on range also may be treated in this manner. Guinea chicks may be pinioned after they are from 1 to 2 weeks old by snipping off the last joint of the wing and dipping the stump in tannic acid. It is more difficult to pinion an adult bird, and in that case the wing must be tied up to prevent excessive bleeding. Another method of treating adult stock is to clip their flight feathers every year. In handling or carrying guinea fowl they should be held by their wings, as shown in figure 4, and not carried by their legs.

EGG PRODUCTION

As profitable egg producers, guinea hens cannot compete with chickens, but during the latter part of the spring and throughout the summer they are persistent layers. The eggs are smaller than chicken eggs, weighing about 1.4 ounces each, whereas chicken eggs average about 2 ounces (fig. 5); consequently guinea eggs sell at a lower price. There is no special market for guinea eggs. They are usually graded by dealers as small eggs. Owing to the natural tendency of the guinea hen to hide her nest, many of the eggs, when found, are no longer fit for market. The shells of guinea eggs are so thick and often so dark that it is difficult to test them by candling. For this reason, and also because the eggs are small, dealers do not like to handle them. For home use, however, guinea eggs may take the place of chicken eggs, and some people regard them as superior in flavor. In composition the greatest difference is that the shell is thicker and the yolk makes up a slightly larger proportion of the total egg contents than in the case of chicken eggs.

Usually guinea hens begin laying in April or May, those in the South laying earlier than those in the North. A short time before the beginning of the laying period the hens with their mates begin searching for suitable nesting places among the weeds and brush along the fences or in the fields. Some guinea hens will lay in shelters or nests provided for them when the breeders are confined to the yard. Each day as the hens go to the nests to lay, the male accompanies them and remains nearby until the hens leave the nests. If several guinea hens are mated with one male they usually all lay in the same nest, but sometimes a hen after mating will wander off by herself to make her own nest.

From 20 to 30, and often more, eggs are laid before the guinea hen

becomes broody. She may be broken of her broodiness by removing the eggs from her nest, and soon she will begin laying again. If not allowed to set, guinea hens will continue to lay throughout the summer, laying from 40 to 60, and in some cases 100, eggs during the season.

The wild nature of the guinea hen asserts itself in her nesting habits. Instinct demands that the nest be well hidden from all enemies, such as crows, dogs, skunks, opossums, rats, foxes, coyotes, and other predatory animals. If the hen becomes frightened by the intrusion

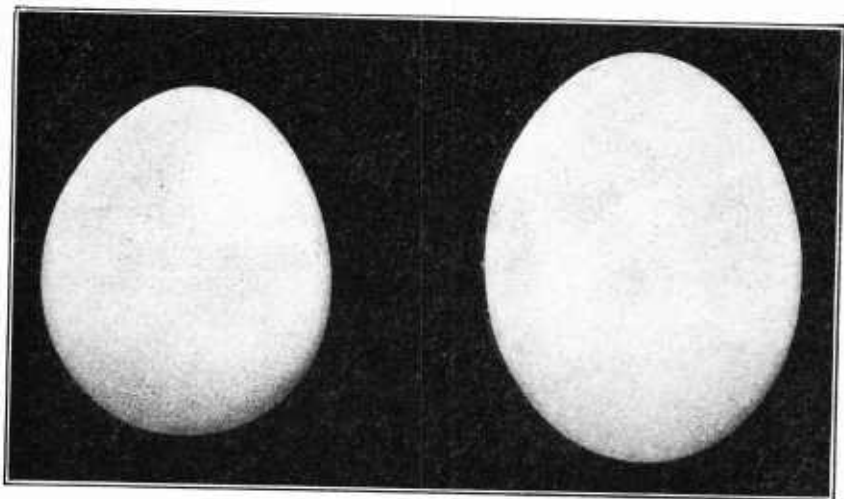


FIGURE 5.—Relative size of eggs of guinea hen (left) and that of a chicken (right).

of some enemy or if her eggs are removed from the nest, she is likely to change her nesting place to a safer location. For this reason she should not be disturbed while she is on the nest, and all the eggs should not be removed without leaving a few nest eggs in their place. If the eggs are gathered every day, two or three usually are enough to leave as nest eggs. It is not necessary to remove the eggs with a spoon or to scrape them out with a stick, as is sometimes done to prevent the hand from coming in contact with the nest and leaving a scent. After the eggs are gathered they should be kept in a cool place; they should be set while fresh and never held more than 2 weeks if it can be avoided.

NATURAL INCUBATION AND BROODING

Chickens are commonly used for hatching guinea eggs, but guinea hens, turkey hens, and incubators also may be used successfully. The usual setting for a guinea hen is 12 to 14 eggs, for a hen of one of the general-purpose breeds, such as Plymouth Rock, 15 to 18, and for a turkey hen, about 20. The incubation period for guinea eggs is about 26 days.

If the nest in which the guinea hen becomes broody is safe from any disturbance, she may be allowed to have a setting of eggs, and more than likely she will hatch every fertile egg, provided all the eggs hatch

at about the same time. As soon as the guinea chicks begin to leave the nest the hen will leave with them, and any fertile eggs that remain will be spoiled unless placed in an incubator or under another broody hen before they become chilled. Guinea hens usually are too wild to be set anywhere except in the nests in which they have become broody, and often such nests are unsafe. Because of these disadvantages and the fact that guinea hens do not make the most satisfactory mothers for guinea chicks, chicken hens are often used for hatching and brooding the guinea chicks. Broody turkey hens, when not needed for hatching turkey eggs, often are given a setting of guinea eggs, and they hatch

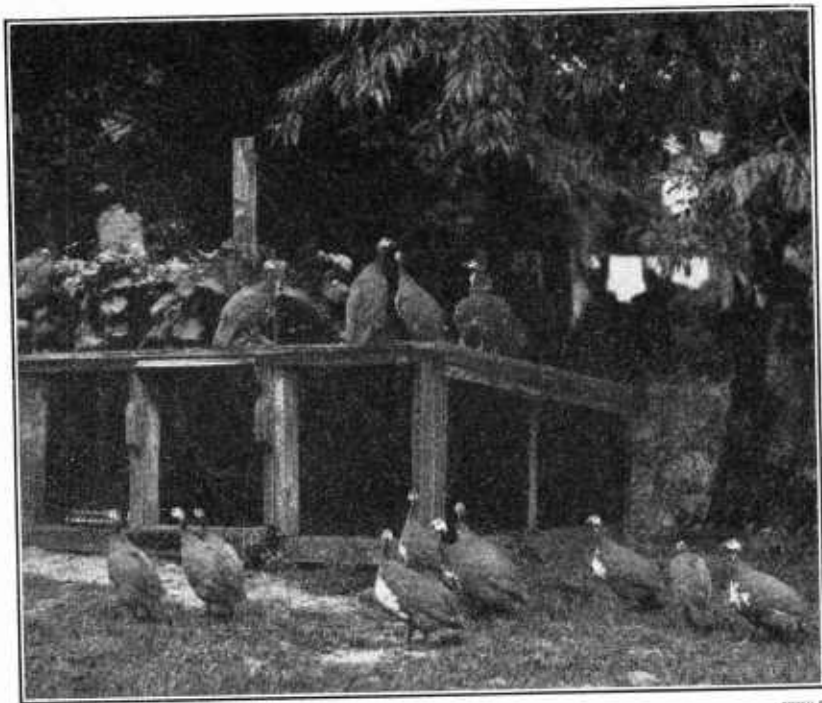


FIGURE 6.—A flock of half-grown guineas and the coop in which they were reared, by a chicken mother.

them as well as chicken hens; a turkey can cover more eggs than a chicken.

Chicken hens make the best mothers for guinea chicks. Given warm, dry weather and plenty of range, turkey and guinea hens may be used successfully, but in case of rains or a heavy dew the mother turkey or guinea hen is likely to lead the young guineas through the wet grass, and many may be lost from becoming wet and chilled. Neither turkey nor guinea hens can be induced to seek the shelter of a coop at night and during storms; they will remain out in the fields to hover their broods wherever they happen to be when nightfall overtakes them. When the young guineas are old enough to roost they can be trained to roost wherever desired by driving them to the roosting place and feeding them there regularly. After the first few nights

they will come to the place themselves; but until they are old enough to roost, many of the young guineas that are being raised with turkey or guinea hens are likely to be killed by exposure to cold and dampness or by being led over so wild a range that they become exhausted and are unable to keep up with the remainder of the flock.

When chicken hens are used as mothers, it is very easy to raise a large percentage of the total number of guinea chicks hatched. Each hen that is to have a brood should be allowed to hatch out some of the eggs herself, after which she will mother all the young guineas that are given her. A Plymouth Rock hen can care for 18 to 24 guinea chicks. After the hatch is completed and the chicks are strong enough to leave the nest, the hen and brood are ready to be removed to the coop provided for them. The greatest fault of the chicken hen as a mother is that on the average farm she has become accustomed to staying about the barnyard, and if allowed to do so she will keep her guinea chicks there also. Conditions about the barnyard are entirely unsuited for raising guineas, and, to prevent the hen from keeping her brood there, the coop should be placed on clean ground away from other poultry houses and yards and the hen induced to remain there until the guineas are old enough to roost alone (fig. 6).

ARTIFICIAL INCUBATION AND BROODING

Incubators are used as successfully in hatching guinea eggs as in hatching turkey eggs. The cabinet or forced-draft incubators are operated in exactly the same way for both kinds of eggs. The cabinet incubators are usually operated at 99.7° F. for the first 22 days and at 97° for the rest of the period. In the sectional or single-tier machines, the thermometer is lowered sufficiently to make its relative position above the guinea eggs similar to its former position above the turkey eggs, and the temperature is usually kept at 102.5° for the first week and at 103° for the rest of the incubation period.

Very little has been done in the artificial brooding of guinea chicks. They are naturally of a wild nature, and they develop best on free range. It is possible, however, to raise them successfully by artificial means provided good methods are used and care is taken to keep them on clean ground. Careful sanitation is extremely important when artificial methods of rearing are used and the guinea chicks are kept under more or less confined conditions. The use of colony brooder houses with wire-floored sunning platform attached, such as are being used extensively in brooding turkeys, are suggested as worth a trial by anyone who wants to try raising larger flocks of young guineas by artificial methods.

For the first 2 days the chicken mother should be confined to the coop, in a well-drained location, allowing the guinea chicks to run in and out at will. They will not stay away from the hen unless there is another brood nearby which they are likely to join. After the first few days the chicks become so attached to their foster mother that they will not leave her until they are nearly full grown (fig. 7). By the third day the hen will have recognized the coop as her home and may then be given free range without fear of her wandering far away. At night she will return to the coop with her brood and can be shut in to protect her from prowling animals. After the dew is off the grass

in the morning the coop may be opened and the hen and her brood allowed free range again. When it rains they may be driven to the coop so that the young guineas may be kept warm and dry. The coop should be rainproof and should be built without a floor. If it is moved a short distance every day, the ground beneath it is kept fresh and clean.

Chicken hens to be used in brooding guinea chicks should first be completely freed from lice. This can be done by applying sodium fluoride² to the hens at the time they are set. Use small pinches of this powder among the feathers next to the skin—one pinch on the head, one on the neck, two on the back, one on the breast, one below the vent, one at the base of the tail, one on each thigh, and one scattered on the underside of each wing when spread. Guineaes are less likely to have lice than are chickens, but when guineas are raised with chicken hens care should be taken to keep them from becoming infested. Examine the young chicks about the head and along the

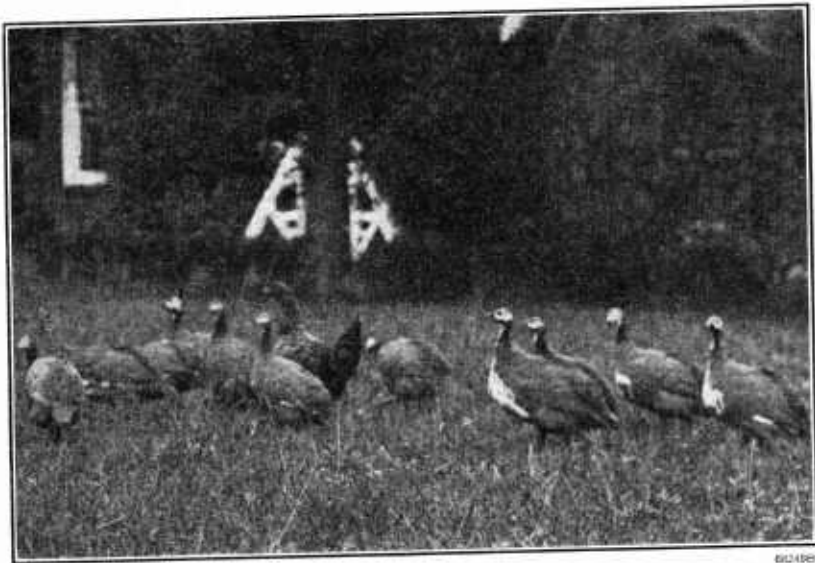


FIGURE 7.—A chicken hen and her brood of young guineas. Although $4\frac{1}{2}$ months old, these guineas still stay with their foster mother.

wing bar at the base of the quill feathers, and if lice are found grease these parts lightly with lard.

FEEDING AND REARING

Guineas are fed in much the same way as chickens or turkeys, but they require less feed, as they are natural rangers and can be expected to find enough seeds of weeds and grasses, buds, insects, and green vegetation in the fields to supply a considerable part of their feed. For the first 24 hours after hatching no feed is required, as the sustenance from the egg is sufficient to nourish them for this period. The first feed may be a mixture of finely chopped, tender green feed and

² See Farmers' Bulletin 1652, Diseases and Parasites of Poultry.

dry, starting mash containing cod-liver oil such as that fed to young turkeys or chickens.³ Hard-boiled eggs, ground or crumbled, may be added if desired. The feed should be placed on clean boards or in small feeders. After the first few days the green feed, unless it is available on the range or in the yards, may be spread on top of the mash in the feeders. The use of all-mash starting and growing rations containing milk is the most practical method of feeding guinea chicks. Finely cracked grains may be added to the ration after the guinea chicks are from 1 to 3 weeks old. As the birds grow older whole grains can be used in place of the finely cracked grains. When the growing birds are on free range, whole or cracked grain is often the only feed supplied after the guineas are a few weeks old. Clabber or other form of milk makes a desirable addition to a grain ration. Water or milk should be always available. Grit also should be kept before the birds.

When guineas are from 6 to 8 weeks old they will leave their coop and begin roosting in some nearby tree or other roost that may be provided for them. They prefer roosting in the open, but if they have been raised with a chicken hen they can be induced to follow her inside a poultry house and roost there. It is advisable to have them become accustomed to going into a house or shed of some sort; otherwise it is almost impossible to catch them when they are wanted for the market. Even after they are partly grown, guineas will remain close to the mother hen (fig. 7). When she goes to her nest to lay, they will follow and wait nearby until she is ready to leave again. This attachment affords an easy method of controlling the natural wild instincts of the guineas and simplifies their production under domestic conditions.

MARKETING

The marketing season for guinea fowl is during the latter part of the summer and throughout the fall. At this time the demand in the city markets is for young birds weighing from 1½ to 2½ pounds. At about 3 months of age guineas weigh approximately 1½ pounds. At this size a few begin reaching the markets late in June, the general farm supply beginning late in August. As the season advances the demand is for birds weighing over 2 pounds.

According to the wholesale-market quotations in New York City, for the 3-year period 1936-38, the range of average prices per pair of dressed guineas, weighing from 1½ to 2½ pounds each, was as follows:

Month	Price per pair	Month	Price per pair
January-----	\$1. 05-\$1. 60	July-----	\$0. 95-\$1. 15
February-----	1. 00- 1. 45	August-----	. 85- 1. 15
March-----	. 95- 1. 35	September-----	. 85- 1. 35
April-----	1. 05- 1. 25	October-----	. 85- 1. 35
May-----	1. 00- 1. 30	November-----	1. 00- 1. 40
June-----	1. 00- 1. 30	December-----	1. 00- 1. 40

Most guineas are marketed alive and are dressed by the poultry dealers or at the produce houses. Guineas usually are dressed in the same way as chickens except in a few places where the dressed guineas are marketed like game birds with all the feathers left on. For all

³ See Farmers' Bulletin 1409, Turkey Raising.

retail, as well as hotel and restaurant trade, the feathers should be removed. Before shipping any birds to market, however, it is advisable to inquire of the dealer to whom they are to be shipped whether the feathers should be removed.

In preparing guineas for market the birds are usually dry-picked. The vein in the roof of the mouth is severed first to insure thorough bleeding, and the knife is then thrust through the groove in the roof of the mouth into the brain. When the brain is pierced the feathers are loosened by a convulsive movement of the muscles and may be removed easily. If the guineas are to be marketed with the feathers left on, all that needs to be done is to bleed the birds thoroughly.